CIVIL TECH LABS

Accredited by **NABL** as per ISO/ IEC 17025 : 2005

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027

Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654

To,

Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP.

10th July 2017

Dear Sir,

Sub: Testing of Wet Mix Macadam.

As requested, tests on physical properties were carried out for the Wet Mix Macadam supplied by you, for the work of **' Providing asphalting to main and cross roads of Someshwaranagara in ward no 04.'**

Please find the enclosed Test Reports of the above.

Thanking You,
For Civil Tech Labs

Khushboo

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE

AEW4

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5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON WET MIX MACADAM

Name & Address of the Customer	AEE,Yelahanka Satellite Town Sub Division, BBMP
Name of Work	Providing asphalting to main and cross roads of Someshwaranagara in ward no 04
Name of the Agency	Sri. Thilak Kumar. H. S
Date of Testing	10/07/2017
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2016)

IS Sieve Designation (mm)	% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 400-11 for WMM	Actual % By Weight Passing IS Sieve	Remarks
53	100	100	Satisfies the requirement
45	95-100	98.5	
22.4	60-80	72.1	
11.2	40-60	48.5	
4.75	25-40	30.3	
2.36	15-30	25.4	
0.6	8-22	18.5	
0.075	0-8	4.3	

Note:

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3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

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(KHUSHBOO L.)
Quality Manager

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T-2654

To,

Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP.

19th July 2017

Dear Sir,

Sub: Testing of Bituminous macadam & Bituminous concrete.

As requested, tests on physical properties were carried out for the Bituminous macadam & Bituminous concrete supplied by you, for the work of **'Providing asphalting to main and cross roads of Someshwaranagara in ward no 04'.**

Please find the enclosed Test Reports of the above.

Thanking You,
For Civil Tech Labs

Khushboo

(KHUSHBOO L.)
Quality Manager

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5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON BITUMINOUS MACADAM MIX GRADE - 2

Name & Address of the Customer	AEE,Yelahanka Satellite Town Sub Division, BBMP
Name of Work	Providing asphalting to main and cross roads of Someshwaranagara in ward no 04
Name of the Agency	Sri. Thilak Kumar. H. S
Date of Testing	14/07/2017
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2016)

	Sample-1		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-4 for BM Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
26.5	100	**100**	**Satisfies the requirement**
19	90-100	**97.8**	
13.2	56-88	**68.3**	
4.75	16-36	**30.4**	
2.36	4-19	**17.2**	
0.3	2-10	**8.4**	
0.075	0-8	**5.4**	

Note:

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(KHUSHBOO L.)
Quality Manager

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5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON BITUMINOUS MACADAM MIX GRADE - 2

Name & Address of the Customer	AEE,Yelahanka Satellite Town Sub Division, BBMP
Name of Work	Providing asphalting to main and cross roads of Someshwaranagara in ward no 04
Name of the Agency	Sri. Thilak Kumar. H. S
Date of Testing	14/07/2017
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2016)

	Sample-2		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-4 for BM Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
26.5	100	**100**	**Satisfies the requirement**
19	90-100	**97.5**	
13.2	56-88	**74.6**	
4.75	16-36	**20.4**	
2.36	4-19	**11.4**	
0.3	2-10	**6.2**	
0.075	0-8	**4.6**	

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(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

DETERMINATION OF BINDER CONTENT FROM BITUMINOUS PAVING MIXTURE FOR QUALITY CONTROL - BITUMINOUS MACADAM MIX-GRADE 2

Name & Address of the Customer	AEE,Yelahanka Satellite Town Sub Division, BBMP
Name of Work	Providing asphalting to main and cross roads of Someshwaranagara in ward no 04
Name of the Agency	Sri. Thilak Kumar. H. S
Date of Testing	14/07/2017
Technical Reference	ASTM: D2172/D2172M-17 - Test Method A - Centrifuge Extraction

Specification: As Per MORTH (4th Revision) Table 500-4 BM-Grade -2, Bitumen Content for BM Grade-2 is 3.3 % TO 3.5 %

Sl. No.	Description	Values
1	Weight of bituminous mixture before extraction test, W_1 g	2000.0
2	Total Weight of mineral aggregate obtained from centrifuge extractor, W_2 g	1931.6
3	Total weight of Bitumen extracted from the mixture, W_3 g = (W_1-W_2) g	68.4
4	Bitumen content in %, (W_3/W_1) %	3.42

Remarks	**Satisfies the requirement**

Note:

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(KHUSHBOO L.)
Quality Manager

AE W4

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

DETERMINATION OF BINDER CONTENT FROM BITUMINOUS PAVING MIXTURE FOR QUALITY CONTROL - BITUMINOUS CONCRETE MIX-GRADE 2

Name & Address of the Customer	AEE,Yelahanka Satellite Town Sub Division, BBMP
Name of Work	Providing asphalting to main and cross roads of Someshwaranagara in ward no 04
Name of the Agency	Sri. Thilak Kumar. H. S
Date of Testing	19/07/2017
Technical Reference	ASTM: D2172/D2172M-17 - Test Method A - Centrifuge Extraction

Specification: As Per MORTH (4th Revision) Table 500-18, Bitumen Content for BC Grade-2 is 5% to 7%

Sl. No.	Description	Values
1	Weight of bituminous mixture before extraction test, W_1 g	2000.0
2	Total Weight of mineral aggregate obtained from centrifuge extractor, W_2 g	1889.0
3	Total weight of Bitumen extracted from the mixture, W_3 g = (W_1-W_2) g	111.0
4	Bitumen content in %, (W_3/W_1) %	5.6

Remarks	**Satisfies the requirement**

Note:

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(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON BITUMINOUS CONCRETE MIX GRADE - 2

Name & Address of the Customer	AEE,Yelahanka Satellite Town Sub Division, BBMP
Name of Work	Providing asphalting to main and cross roads of Someshwaranagara in ward no 04
Name of the Agency	Sri. Thilak Kumar. H. S
Date of Testing	19/07/2017
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2016)

	Sample-1		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-18 for BC Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
19	100	**100**	**Satisfies the requirement**
13.2	79-100	**98.4**	
9.5	70-88	**78.6**	
4.75	53-71	**60.4**	
2.36	42-58	**43.5**	
1.18	34-48	**38.5**	
0.6	26-38	**30.6**	
0.3	18-28	**20.4**	
0.15	12-20	**16.7**	
0.075	4-10	**6.4**	

Note:

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(KHUSHBOO L.)
Quality Manager

AE W 4

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5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON BITUMINOUS CONCRETE MIX GRADE - 2

Name & Address of the Customer	AEE,Yelahanka Satellite Town Sub Division, BBMP
Name of Work	Providing asphalting to main and cross roads of Someshwaranagara in ward no 04
Name of the Agency	Sri. Thilak Kumar. H. S
Date of Testing	19/07/2017
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2016)

	Sample-2		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-18 for BC Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
19	100	**100**	**Satisfies the requirement**
13.2	79-100	**98.1**	
9.5	70-88	**82.3**	
4.75	53-71	**68.1**	
2.36	42-58	**43.6**	
1.18	34-48	**36.5**	
0.6	26-38	**32.5**	
0.3	18-28	**20.4**	
0.15	12-20	**18.4**	
0.075	4-10	**7.3**	

Note:

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CIVIL TECH LABS BANGALORE

Khushboo

(KHUSHBOO L.)
Quality Manager

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T-2654

To,

Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP.

03rd July 2017

Dear Sir,

Sub: Providing asphalting to main and cross roads of Someshwaranagara in ward no 04

As requested the 28th day Compressive Strength Test of Cubes was carried out for the above work for the samples supplied by you.

Please find the enclosed Test Report of the above.

Thanking you,

For Civil Tech Labs,

Khushboo

(KHUSHBOO L.)
Quality Manager

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5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

Name & Address of the Customer	AEE,Yelahanka Satellite Town Sub Division, BBMP
Name of Work	Providing asphalting to main and cross roads of Someshwaranagara in ward no 04
Name of Agency	Sri. Thilak Kumar. H. S
Grade of Concrete	M-20
No. of cubes tested	3
Technical Reference	IS: 516-1959 (Reaffirmed 2013)

Sl. No.	ID	Dimension of specimen (mm)	Cross sectional area (mm^2)	Date of Casting	Date of Testing	Age at test (Days)	Weight (Kg)	Failure Load (KN)	Compressive Strength (N/mm^2)	Avg Compressive Strength (N/mm^2)
1	Sample-2	150.12 X 150.14 X 150.0	22539	05/06/2017	03/07/2017	28	8.20	475	21.07	21.44
2		150.15 X 150.14 X 150.0	22544				8.22	490	21.74	
3		150.13 X 150.15 X 150.0	22542				8.19	485	21.52	

Note:

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(KHUSHBOO L.)
Quality Manager

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Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654

To,

Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP.

03rd June 2017

Dear Sir,

Sub: Testing of Materials.

As requested, tests on physical properties were carried out for the Materials supplied by you, for the work of **'Providing asphalting to main and cross roads of Someshwaranagara in ward no 04.'**

Please find the enclosed Test Reports of the above.

Thanking You,
For Civil Tech Labs

Khushboo

(KHUSHBOO L.)
Quality Manager

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TEST REPORT

TEST ON CEMENT

Name & Address of the Customer	AEE,Yelahanka Satellite Town Sub Division, BBMP
Name of Work	Providing asphalting to main and cross roads of Someshwaranagara in ward no 04
Name of the Agency	Sri. Thilak Kumar. H. S
Date of Testing	03/06/2017

Tests	**Test Method As Per IS & Apparatus**		**Results**		**Requirements As Per IS 8112:1989**	**Remarks**
	IS Code	**Method**	**Value**	**Unit**		
Initial Setting Time	**IS-4031 (Part-5) 1988**	VICAT	57	min	Not Less Than 30 Minutes	Satisfies Requirement
Final Setting Time	**IS-4031 (Part-5) 1988**	VICAT	580	min	Not More Than 600 Minutes	Satisfies Requirement
Soundness	**IS-4031 (Part-3) 1988**	LE-CHATELIER	3	mm	Not More Than 10 mm	Satisfies Requirement

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(KHUSHBOO L.)
Quality Manager

AE W4

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5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON FINE AGGREGATES

Name & Address of the Customer	AEE,Yelahanka Satellite Town Sub Division, BBMP
Name of Work	Providing asphalting to main and cross roads of Someshwaranagara in ward no 04
Name of the Agency	Sri. Thilak Kumar. H. S
Date of Testing	03/06/2017
Specific Gravity	**2.57**
Technical Reference	IS : 2386(Part I)-1963 (Reaffirmed 2016), IS : 2386 (Part III)-1963 (Reaffirmed 2016)

Sample	IS Sieve designation (mm)	Sieve Analysis (% Passing IS Sieve)	Grading Requirement as per IS 383 : 2016				Grading Zone	Remarks
			ZONE-I	ZONE-II	ZONE-III	ZONE-IV		
River Sand	10	**100**	100	100	100	100	II	Satisfies the requirement
	4.75	**95.6**	90-100	90-100	90-100	95-100		
	2.36	**80.4**	60-95	75-100	85-100	95-100		
	1.18	**65.1**	30-70	55-90	75-100	90-100		
	0.6	**51.2**	15-34	35-59	60-79	80-100		
	0.3	**20.5**	5-20	8-30	12-40	15-50		
	0.15	**4.2**	0-10	0-10	0-10	0-15		

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(KHUSHBOO L.)
Quality Manager

AE W9

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON COARSE AGGREGATES 40mm ↓ Graded

Name & Address of the Customer	AEE,Yelahanka Satellite Town Sub Division, BBMP
Name of Work	Providing asphalting to main and cross roads of Someshwaranagara in ward no 04
Name of the Agency	Sri. Thilak Kumar. H. S
Date of Testing	03/06/2017
Specific Gravity	**2.67**
Water Absorption	**0.29%**
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2016), IS : 2386 (Part III)–1963 (Reaffirmed 2016)

IS Sieve Designation (mm)	**Sieve Analysis (% Passing IS Sieve)**	**Grading Requirement as per IS 383 : 2016**	**Remarks**
80	**100**	100	**Satisfies the requirement**
40	**95.4**	90-100	
20	**60.1**	30-70	
10	**30.6**	10-35	
4.75	**4.6**	0-5	

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Khushboo

(KHUSHBOO L.)
Quality Manager

AE W4

CIVIL TECH LABS

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Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON COARSE AGGREGATES 20mm ↓ Graded

Name & Address of the Customer	AEE,Yelahanka Satellite Town Sub Division, BBMP
Name of Work	Providing asphalting to main and cross roads of Someshwaranagara in ward no 04
Name of the Agency	Sri. Thilak Kumar. H. S
Date of Testing	03/06/2017
Specific Gravity	**2.62**
Water Absorption	**0.31%**
Technical Reference	IS : 2386(Part I)-1963 (Reaffirmed 2016), IS : 2386 (Part III)-1963 (Reaffirmed 2016)

IS Sieve Designation (mm)	Sieve Analysis (% Passing IS Sieve)	Grading Requirement as per IS 383 : 2016	Remarks
40	**100**	100	**Satisfies the requirement**
20	**98.2**	90-100	
10	**45.3**	25-55	
4.75	**5.8**	0-10	

Note:

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Khushboo

(KHUSHBOO L.)
Quality Manager

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